2043 MAY 25 RECD 191038

SEARCH REQUEST FORM   Scientific and Technical Information Center - EIC2800
Rev. 1/26/2006 This is an experimental format -- Please give suggestions or comments to Jeff Harrison, JEF-4B68, 22511.

Date 5/23/06 Serial # 10/646,897 Priority Application Date 3/6/02

Your Name Mihevis _____ Examiner # _____

AU 2822 Phone 272-1838 Room JA30

In what format would you like your results? Paper is the default.   (PAPER)   DISK   EMAIL
If submitting more than one search request form, please prioritize the searches in order of need.
Need before 5/31

Where have you searched so far on this case?
Circle: USPT   DWPI   EPO Abs   JPO Abs   IBM TDB
Other:_____

What relevant art have you found so far? Please attach citations or Information Disclosure Statements.
_____

What types of references would you like? Please checkmark:

Primary Refs ✓ Nonpatent Literature ____ Teaching Refs ____
Secondary Refs ___ Foreign Patents _____ Other _____

Is this a "Fast & Focused Search" request? (Circle One)   YES   (NO)

A "Fast & Focused Search" is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2800 and on the STIC NPL Web Page at http://uspto-a-pattr-2/siraapps/stic/npl/nplsearch.htm

---

What is the topic, such as the novelty, motivation, utility, or other specific facets defining the desired focus of this search?   Please include the concepts, synonyms, keywords, acronyms, registry numbers, definitions, structures, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract and pertinent claims.

Claims 170-179 & 269-272

Problem: See pages 2 & 3
Solution: "   "   3-7

Thinned die encapsulated by polymer layers

US 6,717,245 - 6,607,976
  - 6,013,534 - 6,620,731
  - 6,228,678

Staff Use Only	Type of Search	Vendors	- 6,228,678
Searcher: HARRISON	Structure (#)_____	STN X	
Searcher Phone: 22511	Bibliographic X	Dialog X	
Searcher Location: STIC-EIC2800, JEF-4B68	Litigation_____	Questel/Orbit_____	
Date Searcher Picked Up: 5-30-06	Fulltext_____	Lexis-Nexis_____	
Date Completed: 30	Patent Family_____	WWW/Internet_____	
Searcher Prep/Rev Time: 40	Other DPCI	Other_____	
Online Time: 1.25			

31may06 08:09:17 User259284 Session D3655.2

SYSTEM:OS - DIALOG OneSearch
  File 23:CSA Technology Research Database 1963-2006/May
  File   2:INSPEC 1898-2006/May W3
  File   6:NTIS 1964-2006/May W3
  File   8:Ei Compendex(R) 1970-2006/May W3
  File 14:Mechanical and Transport Engineer Abstract 1966-2006/May
  File 25:Weldasearch 19662006/May
  File 31:World Surface Coatings Abs 1976-2006/Jun
  File 33:Aluminium Industry Abstracts 1966-2006/May
  File 34:SciSearch(R) Cited Ref Sci 1990-2006/May W3
  File 35:Dissertation Abs Online 1861-2006/May
  File 36:MetalBase 1965-20060529
  File 46:Corrosion Abstracts 1966-2006/May
  File 56:Computer and Information Systems Abstracts 1966-2006/May
  File 57:Electronics & Communications Abstracts 1966-2006/May
  File 60:ANTE: Abstracts in New Tech & Engineer 1966-2006/May
  File 61:Civil Engineering Abstracts. 1966-2006/May
  File 63:Transport Res(TRIS) 1970-2006/Apr
  File 64:Environmental Engineering Abstracts 1966-2006/May
  File 65:Inside Conferences 1993-2006/May 30
  File 68:Solid State & Superconductivity Abstracts 1966-2006/May
  File 81:MIRA - Motor Industry Research 2001-2006/Mar
  File 94:JICST-EPlus 1985-2006/Feb W4
  File 95:TEME-Technology & Management 1989-2006/May W4
  File 96:FLUIDEX 1972-2006/May
  File 99:Wilson Appl. Sci & Tech Abs 1983-2006/Apr
  File 103:Energy SciTec 1974-2006/Apr B2
  File 104:AeroBase 1999-2006/Mar
  File 118:ICONDA-Intl Construction 1976-2006/Apr
  File 134:Earthquake Engineering Abstracts 1966-2006/May
  File 144:Pascal 1973-2006/May W1
  File 239:Mathsci 1940-2006/Jul
  File 240:PAPERCHEM 1967-2006/May W4
  File 248:PIRA 1975-2006/Apr W3
  File 293:Engineered Materials Abstracts 1966-2006/May
  File 315:ChemEng & Biotec Abs 1970-2006/May
  File 323:RAPRA Rubber & Plastics 1972-2006/Apr
  File 335:Ceramic Abstracts/World Ceramics Abstracts 1966-2006/May
  File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec

Set   Items   Description
S1   322   (6 OR SIX)(W)SIDES
S2   251362   (COMPLET????? OR FULL???? OR 100 OR ENTIRE???? OR ALL OR ALLOVER? OR OVERALL? OR
TOTAL??)(2N)(SURROUND???? OR AROUND OR ENCAPSUL????? OR SEAL???? OR PROTECT???? OR COVER???? OR ISOLAT???? OR
INSULA????)
S3   3   1AND2
S4   2   RD S3   (unique items)
S5   9160   S1:S2 AND SEMICONDUCT????????
S6   5342   S1:S2 AND PACKAG??????
S7   1746   S1:S2 AND INTERCONNECT??????
S8   3114   S1:S2 AND (BUMPS OR BALLS OR PILLARS OR POSTS OR PADS OR CONTACTS OR TERMINALS)
S9   892   S1:S2 AND THINN???????
S10   11743   S1:S2 AND SURFACES
S11   1902   S1:S2 AND SIDES
S12   4653   S1:S2 AND TOP
S13   2668   S1:S2 AND BOTTOM
S14   175   S1:S2 AND TOPS
S15   164   S1:S2 AND BOTTOMS
S16   37   S1:S2 AND BGA? ?
S17   0   S1:S2 AND BALLGRID?
S18   50   S1:S2 AND BALL()GRID????
S19   5087   S1:S2 AND ARRAY?????
S20   2678   S1:S2 AND (DIE OR DIES OR DICE OR DICES OR DICED OR DICING?? OR SINGLAT?????)
S21   2951   S1:S2 AND (CSP? ? OR CHIP?????? OR MICROCHIP? OR CLP? ?)
S22   1923   S1:S2 AND (WAFER?????? OR WLP? ? OR WSP? ?)
S23   4363   S1:S2 AND (INTEGRATED()CIRCUIT?? OR ICS)
S24   1237   S1:S2 AND IC
S25   11233   S1:S2 AND (ULSI OR VLSI OR INTEGRATED OR MONOLITH??????)
S26   893   S1:S2 AND (RESIN??? OR PLASTIC??? OR POLYMER???? OR PHOTOPOLYMER???? OR COPOLYMER????? OR
ELASTOMER???? OR THERMOSET???? OR THERMOPLASTIC???)(2N)(LAYERS OR FILMS OR MULTILAYER? OR BILAYER? OR TRILAYER? OR
LAYERED OR LAYERING? OR SUNLAYER? OR OVERLAYER?)
S27   73   S1:S2 AND PARYLEN?
S28   119   S1:S2 AND PHOTOPOLYMER?
S29   4   S1:S2 AND PHOTO()POLYMER???

S30	22	S1:S2 AND (PHOTOSENS? OR PHOTO)(1N)(POLYMER??? OR RESIST OR RESISTS OR ORGANIC)
S31	2613	S1:S2 AND CONFORM??????
S32	2107	S1:S2 AND EDGES
S33	5726	S1:S2 AND EDGE??
S34	4976	S1:S2 AND MULTI
S35	9450	S1:S2 AND MULTIPLE
S36	326	S1:S2 AND (RESIN??? OR PLASTIC??? OR POLYMER???? OR PHOTOPOLYMER???? OR COPOLYMER????? OR ELASTOMER???? OR THERMOSET???? OR THERMOPLASTIC??? OR ORGANIC? ? OR PHOTORESIST? ?)(2N)(STACK????? OR SANDWICH????? OR LAMINA?????)
S37	999	S1:S2 AND (THIN OR THINN?????? OR ULTRATHIN? OR SUPERTHIN? OR THICK????? OR REDUCED OR RECESS?????)(2N)(DIE OR CHIP OR MICROCHIP OR SEMICONDUCT???? OR SUBSTRATE? ? OR COMPONENT? ?)
S38	1	S1:S2 AND (RESIN??? OR PLASTIC??? OR POLYMER???? OR PHOTOPOLYMER???? OR COPOLYMER????? OR ELASTOMER???? OR THERMOSET???? OR THERMOPLASTIC???)(2N)(SUBLAYER?)
S39	64	CONTACT()BUMPS
S40	34	THINNED()DIE
S41	6152	POLYMER()LAYERS
S42	460	SEMICONDUCT?????()COMPONENT
S43	67698	S5:S38
S44	0	39AND43
S45	0	40AND43
S46	55	41AND43
S47	1	42AND43
S48	1	S47 NOT S3
S49	55	S46 NOT (S47 OR S3)
S50	0	S49 AND S8:S9
S51	55	S49 AND S16:S33
S52	55	S49 AND S34:S42
S53	55	S51:S52
S54	17	S53/2002-2006
S55	38	S53 NOT S54
S56	12	S55 AND (SEMICONDUCT????? OR THINN???? OR COMPONENT? ? OR CONTACT? ? OR BUMP??)
S57	22300	(POLYMER???? OR PARYLEN????? OR PHOTOPOLYMER????)(3N)(COVER????? OR ENCAPSUL????? OR COMPLETELY OR FULLY OR TOTALLY OR EDGES)
S58	26	S55 NOT S56
S59	1	S57 AND S58
S60	25	S58 NOT S59
S61	322	S1 AND S5:S54
S62	0	S1 AND S57
S63	204	RD S61 (unique items)
S64	415	(6 OR SIX)()SURFACES
S65	253	RD S64 (unique items)
S66	457	S63 OR S65
S67	455	S66 NOT S3
S68	1	S67 AND THINN??????
S69	22	S67 AND LAYERS
S70	14	S67 AND EDGES
S71	3	S67 AND ENCAPSUL??????
S72	17	S67 AND (POLYMER??? OR HOMOPOLYMER???? OR ENCAPSUL?????? OR PARYLEN????? OR PHOTOPOLYMER? OR PHOTORESIST? ?)
S73	42	S67 AND SEMICONDUCT???????
S74	17	S67 AND (DIE OR DIES OR CHIP?????? OR MICROCHIP? ? OR CSP? ?)
S75	27	S67 AND PACKAG??????
S76	119	S68:S75
S77	81	S76 NOT S76/2002-2006
S78	0	69AND70
S79	0	69AND72
S80	10	69AND73
S81	0	69AND74
S82	1	69AND75
S83	0	72AND73
S84	3	72AND74
S85	1	72AND75
S86	1	73AND74
S87	2	73AND75
S88	18	S68 OR S71 OR S78:S87
S89	68	S77 NOT S88
S90	256	SIX()SIDES
S91	509	SIX()SIDED
S92	204	SIX()SURFACES
S93	1642	(FULL OR FULLY OR COMPLETE OR COMPLETELY OR TOTAL OR TOTALLY OR ENTIRELY OR ENTIRE)(W)ENCAPSUL???????
S94	51	"ALL"()(6 OR SIX)(W)SIDES
S95	18	"ALL"()(6 OR SIX)(W)SURFACES
S96	962	S90:S92
S97	0	93AND96
S98	69	S94:S95

S99	42	RD S98 (unique items)
S100	120	S90:S99 AND SEMICONDUCT??????
S101	100	S90:S99 AND INTERCONNECT??????
S102	14	S90:S99 AND (BUMPS OR BALLS OR BGA? ? OR CSP? ?)
S103	3	S90:S99 AND HERMETIC???????
S104	1649	S90:S99 AND ENCAPSUL???????
S105	510	S1:S2 AND HERMETIC??????? ·
S106	9	100AND101
S107	104	100AND104
S108	71	101AND104
S109	48	S105 AND SEMICONDUCT??????
S110	24	S102:S103 OR S106
S111	17	RD S110 (unique items)
S112	14	S90:S105 AND THINN??????
S113	8	RD S112 (unique items)
S114	20	S90:S105 AND BUMPS
S115	172	S90:S105 AND LAYERS
S116	1	S114 AND S115
S117	38	S114:S115 AND (CSP? ? OR CHIP? ? OR MICROCHIP? OR CHIPSCAL? OR CHIPLEVEL? OR WAFER??????)
S118	37	S117 NOT S116
S119	18	RD S118 (unique items)
S120	284	AU=(GRIEVE, A? OR CAPOTE, M? OR CAPOTE, A? OR LENOS, H? OR SORIANO, A?)
S121	691	AU=(GRIEVE A? OR CAPOTE M? OR CAPOTE A? OR LENOS H? OR SORIANO A?)
S122	957	S120:S121
S123	31	S122/2000
S124	41	S122/2001
S125	41	S122/2002
S126	0	S123:S125 AND THINN????????
S127	0	S123:S125 AND LAYERS
S128	2	S123:S125 AND EDGE? ?
S129	14	S123:S125 AND ENCAPSUL?
S130	0	S123:S125 AND HERMETIC?
S131	1	S123:S125 AND SEAL????
S132	5	S123:S125 AND SURFACES
S133	0	S123:S125 AND SIDES
S134	17	S128:S133
S135	10	RD S134 (unique items)
S136	185	AGUILA
S137	536	CS=AGUILA?
S138	2	PA=AGUILA?
S139	1	S136:S138 AND THINN??????
S140	17	S136:S138 AND ENCAPSULA??????
S141	1	S136:S138 AND SEAL?????
S142	1	S136:S138 AND HERMETIC?????
S143	20	S139:S142
S144	14	RD S143 (unique items)
S145	10	S144 NOT S135
S146	25	CR=CAPOTE MA?
S147	0	S146/2000-2002
S148	74	AU=GILLEO K?
S149	0	AU=GILLEO B?
S150	8	AU=BLUMEL D?
S151	245	AU=MOUNTAIN D?
S152	3	AU=MCLENAGHAN J?
S153	3401	AU=WAKABAYASHI T?
S154	978	AU=WAKABAYASHI, T?
S155	14	AU=MCLENAGHAN, J?
S156	225	AU=MOUNTAIN, D?
S157	19	AU=BLUMEL, D?
S158	0	AU=GILLEO, B?
S159	295	AU=GILLEO, K?
S160	5079	S148:S159
S161	252	S160/2001
S162	217	S160/2002
S163	233	S160/2000
S164	338	S160/1999
S165	286	S160/1998
S166	356	S160/1997
S167	1682	S161:S166
S168	8	S167 AND THINN?????
S169	39	S167 AND ENCAPSULA?????
S170	1	S167 AND BUMPS
S171	9	S167 AND HERMETIC?????
S172	57	S168:S171
S173	34	RD S172 (unique items)
S174	26	S173 AND (SEMICONDUCT????? OR CHIP?????? OR CSP? ? OR WAFER?????? OR DICE?? OR DIE OR DIES OR DICING??

```
      FILE 'REGISTRY' ENTERED AT 12:06:38 ON 31 MAY 2006
L1           13 SEA ABB=ON  PLU=ON  PARYLEN?

      FILE 'HCAPLUS' ENTERED AT 12:06:44 ON 31 MAY 2006
L2         2227 SEA ABB=ON  PLU=ON  L1 OR PARYLEN?
L3         2228 SEA ABB=ON  PLU=ON  L2 OR ?PARYLEN?
L4           21 SEA ABB=ON  PLU=ON  L3 AND THINN?
L5           93 SEA ABB=ON  PLU=ON  L3 AND ENCAPSUL?
L6          157 SEA ABB=ON  PLU=ON  L3 AND (MULTILAYER? OR MULTI LAYER? OR
                  ?LAYERED OR ?LAYERING OR BILAYER? OR TRILAYER? OR (BI OR
                  TRI)(W)LAYER?)
L7           23 SEA ABB=ON  PLU=ON  L3 AND (TWO OR DOUBLE)(2W)?LAYER?
L8          257 SEA ABB=ON  PLU=ON  (L5 OR L6 OR L7)
L9            5 SEA ABB=ON  PLU=ON  L4 AND L8
                  D ALL HITSTR TOT

      FILE 'STNGUIDE' ENTERED AT 12:09:04 ON 31 MAY 2006

      FILE 'HCAPLUS' ENTERED AT 12:10:22 ON 31 MAY 2006
L10           0 SEA ABB=ON  PLU=ON  L3 AND PREENCAP?

      FILE 'HCAPLUS' ENTERED AT 12:10:26 ON 31 MAY 2006
L11           0 SEA ABB=ON  PLU=ON  L3 AND PRE ENCAP?
L12         206 SEA ABB=ON  PLU=ON  L3 AND (CSP OR CHIP OR MICROCHIP? OR
                  WAFER? OR CHIP#### OR SINGULAT? OR DIE OR DICE#### OR DICING)
L13          37 SEA ABB=ON  PLU=ON  (L4 OR L5 OR L6 OR L7) AND L12
L14          36 SEA ABB=ON  PLU=ON  L13 NOT L9
L15          21 SEA ABB=ON  PLU=ON  L14 AND (?CONNECT? OR ?CONTACT? OR BGA OR
                  ?TERMINAL? OR BALL OR BOND#### OR ARRAY? OR PAD OR BONDPAD?)
L16           6 SEA ABB=ON  PLU=ON  L14 AND (HERMETIC? OR COMPLETE? OR ENTIRE?
                  OR FULLY OR TOTAL##)
L17           5 SEA ABB=ON  PLU=ON  L14 AND (SIDES OR SURFACES)
L18          24 SEA ABB=ON  PLU=ON  (L15 OR L16 OR L17)
                  D ALL HITSTR TOT
```

```
     CAS/STN FILE 'WPIX' ENTERED AT 16:38:07 ON 30 MAY 2006
L1            5 SEA ABB=ON  PLU=ON  (US6717245 OR US6607970 OR US6013534 OR US6620731 OR US6228678)/PN
L2              SEL PLU=ON  L1 1- PN :        20 TERMS

     FILE 'DPCI' ENTERED AT 16:38:26 ON 30 MAY 2006
L3           82 SEA ABB=ON  PLU=ON  L2/PN.D
L4              SEL PLU=ON  L3 1- PRN :       120 TERMS

     FILE 'WPIX, JAPIO, HCAPLUS' ENTERED AT 16:39:02 ON 30 MAY 2006
L5          221 SEA ABB=ON  PLU=ON  L4
L6           26 SEA ABB=ON  PLU=ON  L5 AND ?THINN?
L7            1 SEA ABB=ON  PLU=ON  L5 AND ULTRATHIN?
L8            0 SEA ABB=ON  PLU=ON  L5 AND MICROTHIN?
L9           36 SEA ABB=ON  PLU=ON  L5 AND THIN
L10           1 SEA ABB=ON  PLU=ON  L5 AND TOTAL######
L11           3 SEA ABB=ON  PLU=ON  L5 AND FULL####
L12           7 SEA ABB=ON  PLU=ON  L5 AND COMPLET####
L13          18 SEA ABB=ON  PLU=ON  L5 AND EDGES
L14          20 SEA ABB=ON  PLU=ON  L5 AND EDG###
L15          80 SEA ABB=ON  PLU=ON  L5 AND (?POLYMER? OR ?PARYLEN?)
L16           9 SEA ABB=ON  PLU=ON  L5 AND SIDES
L17          27 SEA ABB=ON  PLU=ON  L5 AND SURFACES
L18          47 SEA ABB=ON  PLU=ON  L5 AND (6 OR SIX OR SIXTH OR 6TH)
L19         179 SEA ABB=ON  PLU=ON  L5 AND (DIE OR DICE OR SINGULAT? OR ?WAFER? OR ?CHIP? OR CSP OR WSP)
L20          13 SEA ABB=ON  PLU=ON  L5 AND (DICED OR DICING)
L21          25 SEA ABB=ON  PLU=ON  L5 AND (?ENCAPSUL?)
L22         124 SEA ABB=ON  PLU=ON  L5 AND (CONTACTS OR TERMINALS OR BALLS OR BUMPS OR PILLARS OR PADS)
L23          22 SEA ABB=ON  PLU=ON  L5 AND (BURN#### OR TEST##### OR INSPECT#####)
L24          51 SEA ABB=ON  PLU=ON  (L6 OR L7 OR L8 OR L9)
L25          47 SEA ABB=ON  PLU=ON  (L10 OR L11 OR L12 OR L13 OR L14 OR L15 OR L16 OR L17 OR L18 OR L19
OR L20 OR L21 OR L22 OR L23) AND L24
L26          44 SEA ABB=ON  PLU=ON  L18 AND (L19 OR L20 OR L21 OR L22 OR L23)
L27          34 SEA ABB=ON  PLU=ON  L18 AND (L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR
L15 OR L16 OR L17)
L28          21 SEA ABB=ON  PLU=ON  L25 AND L26
L29          21 SEA ABB=ON  PLU=ON  L25 AND L27
L30          32 SEA ABB=ON  PLU=ON  L26 AND L27
L31          44 SEA ABB=ON  PLU=ON  L28 OR L29 OR L30 OR L6
L32          28 SEA ABB=ON  PLU=ON  L31 AND PRY>2001
L33          20 SEA ABB=ON  PLU=ON  L31 AND (2000 OR 2001 OR 1999 OR 1998 OR 1997 OR 1996 OR 1995 OR 1994
OR 1993)/PRY
L34          16 SEA ABB=ON  PLU=ON  L31 NOT L32
L35          20 SEA ABB=ON  PLU=ON  L33 OR L34
L36             SEL PLU=ON  L35 1- IC RN :       38 TERMS
L37      958559 SEA ABB=ON  PLU=ON  L36
L38          20 SEA ABB=ON  PLU=ON  L35 AND L37

     FILE 'STNGUIDE' ENTERED AT 16:50:53 ON 30 MAY 2006

     FILE 'WPIX, JAPIO, HCAPLUS' ENTERED AT 16:51:59 ON 30 MAY 2006
L39          36 SEA ABB=ON  PLU=ON  L18 NOT L38
L40          28 SEA ABB=ON  PLU=ON  L39 AND PRY>2001
L41           8 SEA ABB=ON  PLU=ON  L39 NOT L40
L42             SEL PLU=ON  L41 1- IC RN :       41 TERMS
L43      565374 SEA ABB=ON  PLU=ON  L42
L44           8 SEA ABB=ON  PLU=ON  L41 AND L43

     FILE 'STNGUIDE' ENTERED AT 16:53:59 ON 30 MAY 2006

     FILE 'WPIX, JAPIO, HCAPLUS' ENTERED AT 16:55:09 ON 30 MAY 2006
L45         193 SEA ABB=ON  PLU=ON  L5 NOT (L35 OR L44)
L46          93 SEA ABB=ON  PLU=ON  L45 AND 2001/PRY,PY
L47          49 SEA ABB=ON  PLU=ON  L45 AND 2000/PRY,PY
L48         113 SEA ABB=ON  PLU=ON  L46 OR L47
L49          10 SEA ABB=ON  PLU=ON  L48 AND ?ENCAPSUL?
L50           9 SEA ABB=ON  PLU=ON  L48 AND ?EDGE?
L51          19 SEA ABB=ON  PLU=ON  L49 OR L50
```